

No. 830,509.

PATENTED SEPT. 11, 1906.

A. G. LAMB.
TUCK MARKER.

APPLICATION FILED SEPT. 2, 1905.

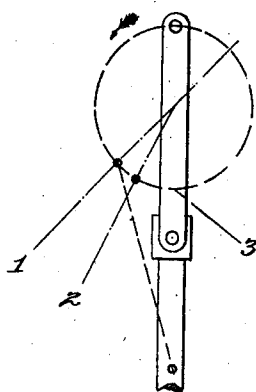


Fig. 1.

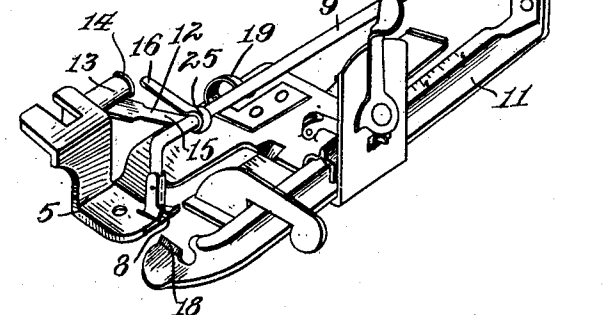


Fig. 2.

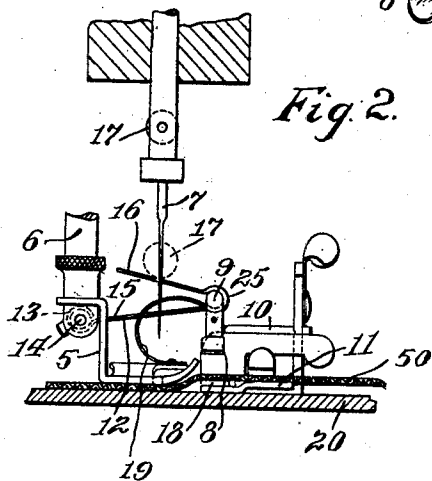


Fig. 3.

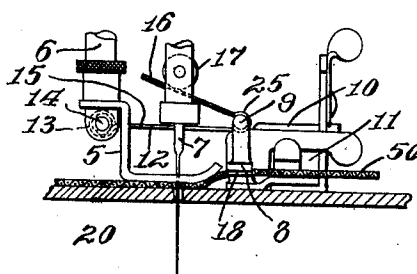
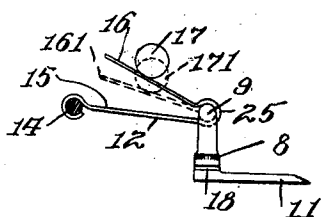


Fig. 4.



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UNITED STATES PATENT OFFICE.

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TUCK-MARKER.

No. 830,509.

Specification of Letters Patent.

Patented Sept. 11, 1906.

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To all whom it may concern:

Be it known that I, AMHERST G. LAMB, a citizen of the United States, residing in Torrington, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Tuck-Markers, of which the following is a specification.

This invention relates to improvements in that part of creasing devices for tuck-markers by which the creaser is operated from the needle-bar of a sewing-machine.

The improvement relates to a direct and effective manner in which a yielding connection is provided for operating the creaser-blade from the needle-bar by an arrangement of features extremely simple in their nature, but organized in a new and peculiar manner.

Figure 1 is a perspective view of a form of embodiment of the present improvement. Fig. 2 is a view, partly cross-sectional, of portions of a sewing-machine and of the device illustrated in Fig. 1 and partly diagrammatical of some portions of the sewing-machine. Fig. 3 is a cross-sectional view of some of the parts shown in Fig. 2, but in a different position. Fig. 2 shows the needle and needle-bar raised, and Fig. 3 shows these parts lowered almost to the end of their stroke. Fig. 4 shows in full lines the actuator-arm at the end of its stroke, which is slightly in advance of the position of Fig. 3, and in dotted lines the position assumed on the completion of a downstroke of the needle-bar.

The tuck-marker or creaser herein illustrated is designed for attachment to the presser-foot bar of a sewing-machine and for actuation from the needle-bar. When adjusted and attached, the frame 5 will be fastened in some convenient manner to the presser-foot bar 6 of the sewing-machine and will be in a substantially fixed position relative to the path of movement of the needle 7.

The creaser proper, or rather the working face of the same, is indicated by 8. It is carried on the end of a rod or marker-arm 9, which is supported at 10 in a slide 11, shiftable upon the frame 5. The frame of the tuck-marking attachment may be made of sheet metal of suitable thickness and rigidity.

The present improvement relates more especially to the actuator-arm 12, by which the said marker-arm 9 is operated from the needle-bar of the sewing-machine. The ac-

tuator-arm 12 is shown pivotally supported, as by an eye 13 and a pivot 14, in some convenient manner, preferably at some distance to one side of the arm 9, and the main portion or arm proper, 15, of said actuator-arm 12 extends across the intervening space between the pivot 14, carried by the frame 5, and the arm 9 and is formed to so engage the arm 9 as to actuate and control its movements. In the preferred form of my improvement said actuator-arm 12 is for the purpose here indicated made from a sheet-metal blank and is carried underneath the arm 9 and bent over the same to form an outwardly-extending yielding or spring arm 16, which is located for properly engaging with a projecting portion 17, carried on the needle-bar and forming the operating element for the actuator-arm. The bend 25 engages and in the present illustration practically embraces the marker-arm. The marker comprises a pair of creasing members 8 and 18, one carried by the marker-arm and one by the slide 11, shiftable upon the framing member, as before referred to, for the purpose of adjusting the line of creasing or marking relative to the line of sewing. The operation of these parts will be more fully understood by a comparison of Figs. 2, 3, and 4, showing the successive positions of said parts. In Fig. 2 the creaser members are separated, and the marker-arm is shown considerably elevated, in the present instance by the instrumentality of a spring 19, carried by the frame and engaging the marker-arm 9, while the arm 12 is shown with its spring-arm 16 widely extended from the arm 15 thereof, this being owing to the elastic construction of said member. In Fig. 3 the needle-bar is shown carried down, so that the operating element 17 has forced down the arm 16, thereby rocking the entire member 12 and also forcibly carrying down the marker-arm 9 for closing the creaser-blade 8 on the fabric 50, lying over the creaser member 18 and resting generally on the sewing-machine throat-plate 20, as will be understood from this figure in comparison with the preceding view. At the time indicated in Fig. 3, however, being the position indicated by 2 in the diagram Fig. 2, the position indicated by 1 in such diagram shows the position at which the operating element 17 first engages the

arm 16, the needle-bar is still descending, and to provide for this and at the same time take advantage of such necessary further movement of the needle-bar and also to properly cushion the creaser-blade while obtaining a highly-efficient operation thereof the said operating-arm 12 is constructed to have the nature of a flexible spring, and being thus constructed the further movement of said operating element 17 from the position shown in Fig. 3 downwardly to the position shown in Fig. 4 (see position 3 in diagram of Fig. 1) operates to spring the arm 16 downwardly into position indicated by the dotted lines at 161, and 171 shows the position of the operating element, and by this means through the flexibility of said member 12 and its arm 16 a yielding pressure is gradually applied to the creaser-blade and a sudden or positive action thereof is avoided. At the same time the pressure upon the fabric is continued by means of the "dwell" obtained through the operation of the operating element 17 and the spring-arm 16, as will be more fully understood by a comparison of said parts in their respective positions, as shown in Figs. 2, 3, and 4.

It will be observed that by reason of the position of the needle-bar being midward, and in the present illustration about mid-way between the pivot 14 and the marker-arm 9, a comparatively rapid movement of the creaser-blade 8 is obtained until this blade rests upon the fabric, after which time the pressure is rapidly but gradually, nevertheless, applied to the fabric, and the manner in which this is accomplished is such that it does not interfere with the proper downward movement of the creaser-blade 8, notwithstanding the operation of the same is made gentle and its action is by a gradual increasing force or pressure, while at the same time applying the resistance to the needle-bar in a correspondingly gradual manner, thereby minimizing the shock which the operation of these devices would otherwise normally receive through the operation of the mechanism of the sewing-machine.

50 Having described my invention, I claim—

1. In a tuck-marker for sewing-machines, the combination with a frame, of a plate shiftable upon said frame, an oscillatory arm carried by the plate, marking members carried by the plate and arm, elastic means for raising the arm, an actuator-arm comprised

of elastic metal bent upon itself and having an eye at one end the bend embracing the oscillatory arm, a stud carried by the frame and affording a bearing for said eye, the free end of said actuator-arm occupying a position midward of the eye and bend and for the engagement of the sewing-machine needle-bar.

2. In a tuck-marker for sewing-machines, the combination with a frame, of a pair of creasing members, a marker-arm carrying one of the creasing members, means for separating said members, an actuator-arm pivoted at one end to the frame and at the other end embracing the marker-arm, and said actuator-arm having a spring-arm connected with it near the marker-arm-engaging portion and located between the pivotal point of the actuator-arm and the marker-arm for the engagement of the sewing-machine needle-bar.

3. In a tuck-marker for sewing-machines, the combination with a frame and means for securing the same fixedly relatively to the path of reciprocation of the sewing-machine needle, a marker embodying a pair of creasing members, means carrying one of the creasing members and shiftable upon said frame, an arm pivotally carried by said shiftable means and carrying the other of said creasing members, elastic means for separating said members, an actuator-arm comprising a member bent upon itself and having an eye at one end, the bend embracing the oscillatory arm, a stud carried by the frame and affording a bearing for said eye, the free end of said actuator-arm being elastically yieldable and occupying a position midward of the eye and bend and for the engagement of the sewing-machine needle-bar.

4. In a tuck-marker for sewing-machines, the combination with a frame, of marking members, an arm oscillatorily mounted on the frame and carrying one of said marking members, and an actuator comprised of elastic metal having a bend and forming a pair of arms, the bend embracing the oscillatory arm, and one of said pair of arms being carried by the frame and the other constituting a spring-arm for the engagement of the operating element of the sewing-machine.

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